Exhibit L

ROUGH DRAFT, UNEDITED VERSION - CCP 2025(r)(2)

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(EXHIBIT NO. 1 MARKED.)

SHELBY F. THAMES, PhD,

having been first duly sworn,

was examined and testified as follows:

EXAMINATION

BY MR. BOWMAN:

Q. Dr. Thames, my name is Mike Bowman. We've met previously. Thank you for joining us this morning.

We are here today to talk about your report in the case Mary Shelton case; is that right?

A. Yes, sir.

Q. Do you know how many pieces of mesh were involved in your analysis of Ms. Shelton's case?

A. One.

Q. Do you know if that was a TVT mesh or a Gyne mesh?

A. Let's see. TVT.

Q. And it was supplied to you by Dr. Kevin Ong?

A. Yes, sir.

Q. As far as you know, he split the sample with plaintiff's counsel before he did anything to it?

A. Yes, sir.

Q. And all of the cleaning steps outlined on page 2 of your report were followed to the letter to the best of your knowledge?
A. Absolutely.
Q. On page 3, we see a figure 2 of some pristine Prolene mesh before cleaning and in figure 3 we see some -- we see a picture of the sample that is representative of Ms. Shelton's case; is that correct?
A. Yes, sir.
Q. Do you know why we're seeing a picture of pristine Prolene mesh instead of TVT?
A. No, sir, but it's the same material.
Q. Do you make a determine in your mind as to whether or not it's Prolene mesh or TVT mesh?
A. Prolene mesh is the same as TVT mesh.
Q. Chemically at least, correct?
A. Correct.
Q. And that's as far as your opinion goes in this case?
A. Yes, sir.
Q. You're not worried about the diameters of the monofilaments or anything like that?
A. No, sir.
Q. With respect to Ms. Shelton's mesh, did

you find any evidence of Prolene oxidation on her mesh?

A. No, sir.

Q. And what were the methods that you used to come to that conclusion?

A. FTIR, light microscopy and scanning electron microscopy.

Q. And did you use those --

A. Excuse me. And the cleaning steps of figure 1.

Q. I see. Did you do any mechanical testing or tensile testing on Ms. Shelton's mesh?

A. No. There was not enough sample.

Q. Do you know if anybody at all did any testing just in their own subjective view of whether or not the pristine mesh and Ms. Shelton's mesh behaved the same after the cleaning process?

A. I wouldn't have any idea what someone else has done.

Q. Did you do it?

A. Do what now?

Q. Did you compare Ms. Shelton's mesh after the cleaning process to a piece of pristine mesh and just sort of hold them in your hand and see if there was any give?

A. You're talking about mechanical properties by field?

Q. Yes, sir.

A. No, sir.

Q. You did not do that? Did you direct anybody to do that?

A. No, sir. There's not enough material for that, sir.

Q. Thank you. With respect to figure 4, figure 4 is a photograph of a Ms. Shelton's mesh before it was cleaned; is that right?

A. Yes, sir.

Q. It actually been soaked in some water and desiccated before it was sent to you; is that right?

A. Yes, sir.

Q. And this is at 200 times magnification, and this is not representative of the entire mesh sample; is that right?

A. Did you say it's not representative of the entire sample?

Q. That was a misstatement. This is not -- the photograph itself is not of the entire mesh sample. This is 200 times magnification at one point on the mesh sample?

A. Yes, sir.

Q. In figure 5, we see the status of the mesh after the first cleaning; is that right?

A. Yes, sir.

Q. And this is after a good deal of the protein has been removed, but not all of it; is that right?

A. That's correct, sir.

Q. In this photograph, do you see flakes of little bits of mesh coming off in several -- I'm sorry. That was a bad question.

Do you see flakes on this photograph, Doctor?

A. Yes, sir.

Q. And have you made a determination as to what those flakes are?

A. Yes, sir.

Q. What is that determination?

A. Proteins.

Q. With respect to Ms. Shelton's mesh, this actually doesn't have any blue dye in it, does it?

A. No, sir. This is an all-clear sample.

Q. Have you made any visual determination, as you have in the past, as to whether or not those flakes on the outside of the mesh are proteinaceous or oxidized polypropylene?

A. We've done FTIR spectroscopy and scanning electron microscopy as well as light microscopy, what you see here. And the FTIR says they're proteins. There's no indication that Prolene was oxidized in any way.

Q. I understand you did an FTIR, and I understand you did SEM. But with respect to your opinions regarding the presence of translucent flakes on blue monofilaments, you can't make that opinion in Ms. Shelton case, can you?

A. Not in this case, no, sir.

Q. Because the monofilaments themselves are clear, correct?

A. That is correct.

Q. Looking at figure 7, --

A. Yes, sir.

Q. -- this is an FTIR of the clear fiber before cleaning; is that correct?

A. Yes, sir.

Q. So this is right when it came to you. Nothing else was done to it after Mr. Ong sent it on to you?

A. That's correct.

Q. And you a have a photograph in the upper right-hand corner of the exact point where the FTIR

was taken on a monofilament, correct?

A. At the crosshairs, yes, sir.

Q. And in this FTIR, you have identified where polypropylene is showing up --

A. Yes, sir.

Q. -- on this reading?

And you've also identified where the protein Amide I carbonyl stretch is?

A. Yes, sir.

Q. And that appears to be at 1652; is that right?

A. Yes, sir.

Q. And you've also identified where the protein Amide N-H stretch is. And that is at 3347; is that right?

A. In that region, yes, sir.

Q. For this FTIR, have you taken into account any shifts that might occur because of the presence of oxidized polypropylene or other proteins in there?

A. Yes, sir, I've taken all that into consideration.

Q. And is it your understanding that the shifts themselves would be negligible?

A. Yes, sir.

Q. That they would be -- can you explain to me what you mean by negligible?

A. The shift might be the width of a pencil dot.

Q. A pencil dot on this FTIR that we're seeing in figure 7?

A. Yeah.

Q. So the shift would be -- it wouldn't be 70 points? It would be just be --

A. Oh, absolutely not.

Q. It wouldn't be 150 either?

A. No, sir. No, sir.

Q. It would just be one or two? Okay. And have you done any research on any shifting associated with oxidized polypropylene to confirm that?

A. To specifically -- the shift is going to to depend upon what's in its environment and what's affecting it and having an effect on the C=O, the polarity of it. And that's well established in the literature. There may be some slight shifts in cases like that, but there's no need for me to do the research on it. It's published in literature.

Q. Nonetheless, it's your understanding that if there was a shift it would be negligible?

A. I think it's a good term.

Q. Thank you. On figure 8, we are looking at the before cleaning of Ms. Shelton's mesh overlaid with the collagenase reference spectra?

A. Yes, sir.

Q. Identified at type VII high purity; is that right?

A. Yes, sir.

Q. And this is an FTIR of the clear fibers; is that right?

A. Well, that's the only fiber we had was clear, yes, sir.

Q. My question was a little confusing. But in this case, you didn't overlay the collegenase with protein that was between the interstices of the mesh; is that right?

A. That's right.

Q. In this case, you took the FTIR from the before cleaning and you overlaid it with the collegenase; is that right?

A. Yes, sir.

Q. Is it your opinion that where the N-H peaks are that that is the only thing that would show up in that area?

A. That is the only thing that would show up

in that area?

Q. Yes, sir.

A. No. You may have some other extraneous materials, but that's primarily where the N-H -- you'll see the peak is very sharp, and it depends upon the amount of material that's present.

Q. So the peak on the collagenase is sharp, correct?

A. Yes, sir.

Q. On the --

A. On the pure sample.

Q. On the pure sample?

A. Uh-huh (affirmative response).

Q. And we're talking about the range between 34- and 3200 for that peak?

A. That's about right, yes, sir.

Q. And what you've identified as the Amide group -- the N-H group on the Amide group?

A. Yes, sir.

Q. You identified it at 3347, correct?

A. Yes, sir.

Q. And do you know if there was presence of oxidation on the Prolene itself, if it would show up in that same general area?

A. I do not have any data that I know of that

would -- the oxidation product that I'm looking for is a C=O bond. That is the bond where there's rupture of the fiber. And until you get to that point, everything else is irrelevant.

Q. So there are at least two -- strike that.

Doctor, are you saying that an O-H group on a polypropylene chain is not evidence of oxidation?

A. It's not relevant to this case in the sense that we're talking about whether or not it decomposes, whether it becomes friable, whether it loses its physical properties. And the only time that occurs or begins to occur is when a carbonyl bond is form. Because when a carbonyl bond is formed, you will have bond rupture of the Prolene. And we don't see that.

I can't say that at some point in time a hydroxyl group might be present, but that is irrelevant to me. What is relevant is the carbonyl group that's present, the C=O. That's when the breaking of the bonds begin to occur.

Q. So the presence of a C=O on polypropylene is evidence of loss of molecular weight?

A. Yes, sir, bond rupture.

Q. Is the presence of an O-H group on

polypropylene the evidence of loss of molecular weight?

A. No, sir.

Q. Why not?

A. Because it doesn't cause bond rupture.

Q. So the oxygen itself is actually in the area of not only the hydrogen that's associated with the polypropylene but also associated with the carbon, correct? So the oxygen is actually in the same area?

A. If you have a bond to a hydroxyl group to attach to Prolene, there will be a carbon-to-oxygen bond, but it doesn't cause bond rupture.

Q. Would you consider the O-H group an intermediate to carbonyl formation?

A. It could be an intermediate, but it doesn't cause bond rupture. So, therefore, since we don't have any oxidation, the likelihood of having hydroxyl group is remote.

Q. Could the hydroxyl group form after the carbonyl had been formed in Ms. Shelton's case?

A. No -- well, yes, I guess it could. But the issue here is we don't get any bond rupture. We don't get any carbonyls.

Q. So because you don't see carbonyls, the

N-H group is not -- I'm going to withdraw that question.

In Ms. Shelton's case, the fact that there might be an O-H group associated with the polypropylene isn't necessarily important to your findings in this case; is that right?

A. Absolutely, because I'm interested in the chemical reaction that would take place, possibly take place because of rupture of the fiber. That's when your properties begin to diminish and only then.

Q. So an O-H group, it could be an intermediary --

A. It could be.

Q. -- to the carbonyl formation?

A. It could be.

Q. Could it be a by-product of carbonyl formation?

A. No, I don't believe so.

Q. Could it form after a carbonyl had formed on the polypropylene itself?

A. I think if carbonyls are forming that certainly you could have one form afterwards, but we aren't getting any carbonyls formed. You've got to keep that in mind now.

You're talking about hypotheticals, because it didn't happen because we don't have any carbonyls bonds here.

Q. According to your opinions and your reading of this FTIR, there are no C=O bonds, correct?

A. Absolutely.

Q. Okay. With respect to figure 9, this appears to be mislabeled; is that right?

A. I'm sorry?

Q. Figure 9, it says blue fiber.

A. Yes, sir. The heading of the figure is mislabeled, that's right. It's a typo error. It's not blue. It's clear.

Q. And, actually, your FTIR states clear fiber?

A. Yes, it does.

Q. It's the report itself that is --

A. Inconsistent, yeah.

Q. And this figure 9 is all of the FTIRs you took on Ms. Shelton's mesh before cleaning as well as after each of the five cleanings that were processed; is that right?

A. These are all the FTIRs, one after each step.

Q. And were these FTIRs taken at the same point on the mesh, if you know?

A. No.

Q. They were taken at five different points?

A. Yes, sir, by necessity. It's much too small a sample. And, also, to find the exact spot where you took the first or the preceding FTIR after you've run it through a cleaning process, it would be impossible to find the exact spot.

Q. Could you mark it with a Sharpie?

A. No, sir.

Q. Could you make an indent with an "X" like a brand or something?

A. I'm not going to indent the sample, no, sir.

Q. Sometimes they do get indented on explants, correct, by the surgeons?

A. Yes, sir, but that's the surgeon. That's not me.

Q. With respect to the after cleaning, the red line on this FTIR, do you see oxidized polypropylene there?

A. No, sir.

Q. There is actually -- but there is some activity around 1720 to 1700, correct?

A. What do you mean by "activity"?

Q. So there's a definite peak and valley, and then there is another peak associated with the 1650 to 1600 range, correct?

MR. HUTCHINSON: Object to the form.

THE WITNESS: There's is not enough definitive shape of those curves to make any conclusion from it. You can't draw a conclusion from that.

BY MR. BOWMAN:

Q. But you do see a peak?

A. I see -- I don't see a peak.

Q. What do you see?

A. I see perhaps the shape of a line moving upward, but no peak.

Q. In any event, it's not as we've seen previously, what I was calling a plateau?

A. Do what?

Q. What I was calling a plateau, that's not present here?

A. It doesn't appear to be, no, sir.

Q. And with the exception of after cleaning 1, it appears that the peaks are diminishing -- I withdraw question.

It appears that the peaks that you

identify from the Amide groups are diminishing over time through the cleaning process; is that correct?

A. That's correct, sir.

Q. And the same is true for the peaks you identify associated with the N-H group around 3200; is that right?

A. That is correct, sir.

Q. And then on figure 11, we have the Prolene mesh exemplar overlaid with the FTIR clear fibers after the cleaning process of Ms. Shelton's mesh; is that right?

A. After step 5, yes, sir.

Q. And the two appear to be a little bit off but pretty close to the same; is that right?

A. I would think that they are essentially identical, sir. I don't know what you mean by "a little bit off." They are almost identical.

Q. So the red, which is the after cleaning for Ms. Shelton, is actually reading a little bit lower, it appears, on every peak and valley than the exemplar mesh; is that right?

A. That has to do with the amount of light passing through it, passing through the sample. It doesn't have anything to do with what is there chemically.

Q. But it is safe to say that they both -- since they're both Prolene and they're both clear that the same amount of light should be passing through?

A. Not necessarily. It depends upon where you took them. Remember, this is a circular fiber. If you took the spectra here, the light is passing through here. It's different if you pass through the center.

Q. So with respect to figure 13, I don't see it specifically mentioned, but your comparison of the blue fiber to the clear fiber, are you using that to form your opinions for the presence of the clear flakes?

A. Well, there was no blue fiber in this sample, but we have a great deal of history between explants where we do have -- this is an unusual explant in the sense that it is all clear.

But in our past work, and we have examined approximately 50 of these, a vast majority of which are clear and blue, and the clear and blue flakes are precisely as I've said before. They're translucent in nature, meaning that the flakes on the blue fiber are clear and, therefore, not polypropylene.

But I can't use the blue here specifically because I don't have a blue fiber, but I can use the past history to say it would be that those flakes are proteins. And the reason they're proteins is that if you look at the FTIR spectra starting with figure 13A and go to B and C and D and E and then look at those in addition to this light microscopy, you can see that there's a continual decrease in proteins until, finally, you get to figure 13F and there's no proteins at all showing on the FTIR. And that's precisely what you would say. So, therefore, these flakes are proteins.

Q. So when you said that you've done this approximately 50 times, the 50 times that you've seen this they have been the result of the cleaning process that you have employed in these cases?

A. What do you mean "they have been the result of"? The cleaning process hasn't done anything but clean it. It hasn't changed anything. It hasn't changed what's on the fibers. It's just taking off the proteinaceous composite that we've been talking about for two days.

Q. So my question was the 50 times that you've seen this has been the result of testing that you performed -- I'm sorry -- cleaning and testing

that you performed on 50 different samples; is that right?

A. Just like this, yes, sir.

Q. And besides evidence in the peer-reviewed literature of the FTIR, is there anything else in the peer-reviewed literature that leads you to believe that the flakes identified in these light microscopy photographs are protein and not oxidized polypropylene?

A. Well, proteins are water soluble, and that's in the peer-reviewed literature. That's well known. That's basic science. And, of course, we've removed this by water, basically a water treatment with sodium hypochlorite to remove flesh.

The peer-reviewed literature knows that proteins occur in those regions where we talked about in the spectra. That's extremely well known. It's in textbooks. It's taught to everybody. And we see light microscopy, which is here. That's in the peer-reviewed literature. And you use that as a means of determining what's on the surface of the material, particularly if it's light microscopy. Scanning electron microscopy is in the peer-reviewed literature. It's in textbooks. It's very well known.

Everything we've done is peer-review supported, textbooks, teach it in the classes. This is nothing exotic. This is basic science we're talking about here. Basic science shows these flake materials to be proteins.

Q. So I'm not sure if we've been going around this for the past two days or not. But those are instrumental analyses, correct?

A. Basic science analysis.

Q. FTIR, light microscopy and SEMs, those are all instrumental analyses for being able to support conclusions -- I'm sorry.

They are instrumental analyses that are run to be able to see results and form conclusions from those results, correct?

A. Yes, sir. As a matter of fact, several years ago I taught a class in spectrophotometric identification of organic compounds, FTIR. I taught it to my students, my undergraduates. So this is the basic science that we're using here to show that there is no oxidation present on Prolene.

Q. But FTIR itself, it actually measures the bulk of the material. It doesn't measure the surface of the material, correct?

A. It measures everything in the material.

So if there's oxidation on the surface, you will see it in the FTIR.

Q. So the bulk of it includes the surface and the core, correct?

A. Restate that, please. The bulk of it? What are you talking about, "it"?

Q. The FTIR is going to not only examine what's on the surface but also what's in the bulk of the material, including the core, correct?

A. What material? You're talking about Prolene?

Q. Anything. It doesn't matter what it is. FTIR, what you put under it, it's going to examine the whole thing?

A. If light will pass through it -- if you get a transmission, light will pass through it, yes; if not, you use ATR and you get a surface reading.

Q. And your opinions for the flakes are based on FTIR readings at least partially, correct?

A. Partially, yes, sir. And the use of the transmission microscopy to make these determinations is supported by peer-reviewed literature as being the best technique.

Q. The best technique? I'm not aware of any peer-reviewed literature that tells us what the best

technique is to measure surface oxidation on polypropylene, are you?

A. Well, you're not a scientist.

Q. I have a biology degree.

A. Oh, wonderful.

Q. But I guess I'm not a scientist.

A. I know it's not my place to ask a question, but if I could, how many FTIRs have you run?

Q. I could tell you off the record.

(OFF-THE-RECORD DISCUSSION.)

BY MR. BOWMAN:

Q. So the general idea, Doctor, is that I'm just looking for something that you could tell me that these flakes are definitively protein and not polypropylene, something in the peer-reviewed literature. I understand that the results that you have garnered and put together for Ms. Shelton's report led you to that conclusion. I'm looking for something in the peer-reviewed literature that I could point to say that the flakes we are seeing are protein and not oxidized polypropylene.

A. If you take the FTIR spectras of the samples, as we have done in figures 9 and -- figure 9, if you take that FTIR spectra and you go

to the Sadtler Library of FTIR Spectra, there is a library of all organic compounds, just like you go to the library and get a book and read it. We'll call them up and say, "We want the FTIR spectra of Prolene, polypropylene." They'll give you this spectra, and we lay that over the samples that we analyze and it will be essentially identical.

Q. I understand you've done that with pristine, and I understand that you've done that with the mesh after it has gone through the cleaning process five times.

But for Ms. Shelton's case, I'm looking at the flakes that are apparent in B, which is after cleaning process 1. And if we look at the overlay of the FTIR done after cleaning process 1, that's what I pointed out to you earlier where there is a red line and there is this ambiguity where there is a peak that I've identified between 1740 and a little bit under 1700 that I'm trying to understand.

I know earlier I talked to you about it, but I'm trying to see how you can line this data up with the data here in B and explain to me that this is not oxidized polypropylene.

MR. HUTCHINSON: Object to form.

THE WITNESS: Well, it may be an

ambiguity to you, but it is not to me. Because if it was oxidized polypropylene, we would see a sharp band occur in the region of 1740, and that's the best I can do for you, sir. What I've told you so far is the best I have to offer you.

BY MR. BOWMAN:

Q. With respect to the SEM images that are associated with Ms. Shelton's case, your report says that the oxidation or degredation of Prolene -- I'm sorry. I am four lines up from the bottom on page 12.

Is says that oxidation or degredation of Prolene did not occur in vivo. It is further confirmed by the lack of surface pitting on Prolene. Do you see that?

A. I do.

Q. Are you aware that the defense expert, MacLean, has confirmed that you can have oxidized Prolene without pitting on it?

MR. HUTCHINSON: Object to form.

THE WITNESS: I'm not aware of that. I have not -- do not remember that. I can't testify to what he said.

BY MR. BOWMAN:

Q. Will you be referring to Dr. MacLean's report at all when you testify about this case at trial?

A. I have not referred to him here.

Q. With respect to the extrusion lines that are present on the SEMs in -- and I think I can see them in the SEMs D, E and F of figure 14. Can you?

A. Yes, sir.

Q. It's your opinion that the presence -- because you can see those extrusion lines via SEM that no surface oxidation has taken place on the Prolene; is that right?

A. That's one more piece of evidence, yes, sir.

Q. And can you point me to some literature describing the extrusion process that would support that opinion?

A. Well, I think it would be basic common sense that if you have the same structural configuration of a material that came out of an extruder and went through the process of forming a fiber and then was placed in the human body and then removed and you had this same structural configuration that you had when the material came out of the extruder, that would be information

enough and proof enough to say nothing has occurred to it. And that's what we're doing right here, sir, and that's doesn't take a peer review to make that sort of analysis. It takes common sense.

Q. So you're aware -- I'm sorry. Are you aware that the monofilaments used to make these meshes are extruded through a dye?

A. Yes, sir.

Q. And have you, yourself, examined the dye used to make these meshes?

A. No, sir.

Q. Have you, yourself, examined the extrusions, the extrusion process?

A. No, sir, not the one -- I know what an extrusion process is. I've extruded material myself. But this specific process we're talking about, I have not witnessed that.

Q. Have you cut a monofilament down the middle to check to see if extrusion lines are there?

A. Cut it down the middle?

Q. Certainly. Take a piece of pristine monofilament and cut it in half, slice it down the middle, and then take the end -- you could even just slice it on the ^bias and then take the end and see if the extrusion lines are still there. Have you

done that?

A. Yes, sir -- excuse me. I have not done that, but I have had samples where we have seen those extrusion lines that we've analyzed. We've looked at the cross-sectional ends, and those extrusion lines are there, samples of Prolene that have -- Prolene explants in the past.

Q. So does it look like when you chop down a tree and you see the lines going down the middle? Is that what it looks like?

A. It looks like extrusion lines, just exactly what you see on the surface if you took a cross-section of it. You know what a cross-section is, of course, biology major?

Q. Yes, sir.

Q. So here's the fiber. You cut it right here. So if you have extrusion lines here and you look at it on the end, then you can see those extrusion lines.

Q. I understand. I'm asking about the cross-section. So let's say --

A. That is the cross-section that I just described to you.

Q. So I'm not sure I understand. So let me see if you can follow my example.

You said you -- well, let's say you chopped down a tree. And, you know, some people, they can age the tree by counting the lines going towards the middle. Are you familiar with that?

A. I certainly am.

Q. So if you get a cross-section of Prolene suture, are you going to see those lines going out?

A. No, sir.

Q. What are you going to see?

A. You're going to see solid polymer until you get to the exterior surface where the lines are formed because that's, you could say, imperfections, but you can't have a perfectly smooth surface that the molten polymer is passing through.

So as the molten polymer passes through the extruder, the extrusion -- the extruder has the indentations that form these lines in the exterior, not in the interior. It's not like a tree. The example does not fit.

Q. So that's --

A. The tree example does not fit.

Q. So that's really what I'm looking for, is I'm looking for some literature that you can point me to where I can better understand this extrusion process and the presence of these extrusion lines.

A. Well, I suggest that you go look under topic of extrusion and ask these specific questions and see what you find out, and I think that's what you'll find out.

Q. Do you have any peer-reviewed literature to support your opinions in this case?

A. I haven't looked for any peer-reviewed for that, because it's sheer common sense.

Q. Well, there are pressure points on the monofilament as it's extruding, correct?

A. Sure, and it's molten.

Q. And it's molten?

A. Uh-huh (affirmative response). And as it comes out it cools.

Q. And it would cool from the outside in, correct?

A. That's correct.

Q. So why wouldn't that process create extrusion lines from the outside in?

A. It does.

Q. Are you saying --

A. No, no. It would on the surface, but it's solid on the -- the extrusion lines are just so deep, sir. They are taking the shape of the extruder barrel, and the extruder barrel doesn't go

all the way into the fiber. They are taking the depth of the extruder barrel, and that's on the outside and only on the outside.

Q. Just to close the loop on this, if I wanted to find some literature that would support your opinion, how would I find it?

A. I think you would go to a textbook on extrusion, molten polymer extrusion, and take a look at that. That would probably take you where you wanted to go.

Q. For your opinion in this case, there's no citation to that in your report; is that right?

A. No, sir. That's correct.

Q. And with respect to the findings of Dr. MacLean, are you aware that he was able to see extrusion lines and he detect oxidized polypropylene in his findings?

A. I don't know what you're talking about, sir.

Q. So are you aware that Dunn and Guelcher were also able to oxidize Prolene and see extrusion lines on the polymers that they looked at as well?

MR. HUTCHINSON: Objection. Scope.

THE WITNESS: I don't know what you're getting at. I have no idea what you're

talking about.

BY MR. BOWMAN:

Q. I'm trying to find support for the opinion, Doctor, that the presence of the extrusion lines --

A. I've told you all I have for you, sir.

MR. BOWMAN: Well, then that's all I have.

EXAMINATION

BY MR. HUTCHINSON:

Q. Dr. Thames, Chad Hutchinson, counsel for Ethicon and Johnson & Johnson. I have a couple of follow-up questions.

You were asked about peer-reviewed literature that supports your opinions that the clear flakes shown in figure 13 are protein and not oxidized Prolene. Do you remember that line of questioning?

A. I do.

Q. Did you cite any peer-reviewed literature in your general report?

A. Yes, sir.

Q. And does the literature you cite suggest that proteins adhere to a foreign body inplant?

A. Absolutely.

Q. Does the literature you cite suggest that proteins occur -- the protein adherence occurs immediately?

A. Yes.

Q. Does the literature you cite suggest that formaldehyde and protein cross-link to create a new polymer?

A. Yes.

Q. And does the literature you cite suggest that that reaction has been known since 1949?

A. Yes.

Q. Does the literature you cite suggest that that reaction is basic chemistry?

A. Yes.

Q. Did Mary Shelton's explant have tissue on it when it was taken out of her body?

A. Yes.

Q. Is tissue comprised of proteins?

A. Yes, sir.

Q. Was Mary Shelton's explant then exposed to formaldehyde?

A. Yes.

Q. Are the light microscopy photographs that we see in figure 13 examples of what is discussed and supported by the peer-reviewed literature?

A. Yes.

MR. HUTCHINSON: I don't have any further questions. Thank you.

FURTHER EXAMINATION

BY MR. BOWMAN:

Q. I do have a quick follow-up.

With respect to the peer-reviewed literature that you cite, Doctor, is there any that you cite with respect to the cross-linking of protein and formaldehyde after it is explanted from the human body, does that literature cite what happens when Prolene explants are excised from the human body and then placed in formalin?

A. The literature doesn't speak specifically to Prolene explants. The literature speaks to the general science that formaldehyde and proteins will react to form a composite. It doesn't matter what's present, whether it's Prolene, whether it's a steel pipe or what.

If you have proteins in the presence of formaldehyde, it's going to form a composit. It's well-known basic science over 60 years. It's been known for more than 60 years.

Q. Does any of the peer-reviewed literature discuss Prolene or Prolene mesh specific?

MR. HUTCHINSON: Are you talking --

THE WITNESS: What does your question mean?

BY MR. BOWMAN:

Q. My question is the peer-reviewed literature on the cross-linking of proteins and formalin.

A. Yes, --

Q. Does it --

A. There is peer-reviewed literature for that. It was known in 1949. It's been printed and published since 1949.

Q. I understand. The question I'm asking is if the literature references Prolene or Prolene mesh at all?

A. What do you mean references it?

Q. It's in reference -- the literature, does it reference Prolene and Prolene mesh specifically?

MR. HUTCHINSON: You're talking about the literature in general?

MR. BOWMAN: I'm talking about the literature that he is using to back his opinion up about this proteinaceous composite.

THE WITNESS: I haven't looked for a

specific reference to that. I think most people have missed that in this. They have not recognized that science. This composite Prolene -- excuse me -- protein-formaldehyde composite will form around anything. It will form flat. It will form around a fiber. If something were square, it would form around it.

It is a general chemical reaction that takes place. And if it happens to be proteins around Prolene, if you put it in formaldehyde, it's going to form. That's the best I can do for you, sir. That is the best. I've stated that over and over today numerous times.

MR. BOWMAN: I have nothing further.

(CONCLUDED AT 10:59 A.M.)